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Pest Management



News

Number 50

November 1984

OFFICIAL NEWSLETTER OF THE INTEGRATED PEST MANAGEMENT RESEARCH, DEVELOPMENT AND APPLICATIONS PROGRAM
2500 SHREVEPORT HIGHWAY • PINEVILLE, LOUISIANA 71360

Forester's Pest Handbook Distributed

Existing ESPBRAP-IPM Program-sponsored "how-to" handbooks have been assembled into a limited distribution, indexed, 3-ring notebook entitled "Forester's Handbook for Reducing Bark Beetle- and Disease-Caused Losses in Southern Pines." Federal and State pest management offices in the South provided the program office with mailing lists and assisted in distributing the handbooks to practicing foresters in beetle- and disease-prone areas. As originally mailed out, the notebook contains seven handbooks dealing with detection, evaluation, and control of bark beetles and the major southern pine pathogens. Five additional handbooks relating to beetle biology, forest management and silviculture, and integration of pest management technology into resource management systems will be added as they become available in the coming months.

Feedback from recipients indicates that the notebook has been enthusiastically received and that demand has already exceeded supply! For information, contact the IPM Program Office, 2500 Shreveport Highway, Pineville, LA 71360; (318) 497-7250.

Oversight and Guidance Committee Approves Phasedown Plans

The last regular meeting of the IPM Program Oversight and Guidance Committee was held September 11 at the Southern Forest Experiment Station headquarters in New Orleans. Highlights of RD&A accomplishments in FY 1984 and plans for FY 1985 were presented by Program Manager Bob Thatcher and Research Coordinator Garland Mason. Technology transfer activities were summarized by Mason, with

highlights of the demonstration project and experiences in technology application in current SPB outbreak areas in Texas presented by Dr. Ronald F. Billings, Head of the Texas Forest Service Pest Control Section. Further observations, experiences, and technology transfer activities on National Forest lands in Texas were described by Dr. David B. Drummond, Field Representative of R-8's Pineville, Louisiana, FPM Field Office.

Final program phasedown plans were also discussed. These included the FY 1985 budget, identification of projects to be supported in FY 1985, disposition of computerized technology, post-Program research needs, wrapup publication plans, and placement of Program personnel.

The Committee urged the Program to complete priority tasks and to continue aggressive technology transfer through the third quarter of FY 1985 and to finalize all wrapup activities by September 30.

Several regular Committee members were unable to attend, but in two cases arranged for someone to represent them and their organizations. Participants in the New Orleans meeting were:

Members and Alternates

John F. Godbee, Pest Management Specialist,
Union Camp Corporation (representing Dr.
Barry F. Malac)

John W. Henley, Assistant Director, Planning
and Applications, Southern Forest Experiment
Station (alternate for Dr. Stanley J.
Barras)

LeRoy Jones, Deputy Regional Forester, State
& Private Forestry, Southern Region

Leonard A. Kilian, Jr., State Forester, South
Carolina State Forestry Commission

Dr. Jerry A. SESCO, Assistant Director, Research
Programs in Florida-Georgia, Southeastern
Forest Experiment Station

- Dr. Michael A. Taras, Head, Department of Forestry, Clemson University (alternate for Dr. Benton H. Box)
- Dr. Thomas H. Ellis, Director, Southern Forest Experiment Station
- Dr. Eldon W. Ross, Director, Southeastern Forest Experiment Station and Co-Chairman, RPG-2.0
- Dr. Arnett C. Mace, Jr., Director, School of Forest Resources and Conservation, University of Florida, Committee Chairman, and Co-Chairman, RPG-2.0

Nonmembers

- Dr. Ronald F. Billings, Principal Entomologist, Pest Control Section, Texas Forest Service
- Dr. David B. Drummond, Field Representative, Forest Pest Management, State & Private Forestry, Southern Region
- Dr. Garland N. Mason, Research Coordinator, IPM Program
- Dr. John A. Naegele, Cooperative State Research Service, U.S. Department of Agriculture
- Dr. Keith R. Shea, Associate Deputy Chief for Research, Forest Service
- Dr. Robert C. Thatcher, Program Manager, IPM Program

Branham and Dennington Recognized for Special Accomplishments

Susan J. Branham, Writer-Editor for the IPM Program, was recently recognized by the Southeastern and Southern Forest Experiment Stations for her outstanding performance in providing guidance to authors and in editing papers for the proceedings of the Integrated Pest Management Symposium held in Athens, Georgia, on June 19-21, 1984. Susan agreed to take on this special assignment when a Southeastern Station editor scheduled to do the job was incapacitated. As a result of her effort, edited papers were submitted before or soon after the Symposium. This will permit the timely release of published proceedings.

Roger W. Dennington, Pine Silviculture Specialist for Cooperative Forestry, Region 8, was recognized for outstanding accomplishment in organizing and implementing a technology transfer effort relating to stand hazard rating

and silvicultural practices for reducing SPB losses on forest lands in the South. As a result of his leadership and his team's effort, 1) working or awareness level knowledge of the technology was provided to National Forest silviculturists and prescriptionists, 2) hazard rating was implemented on five National Forests, 3) several publications dealing with preventive silviculture and/or hazard rating were prepared by team members and cooperators, and 4) a training aid on predicting SPB/tree mortality trends was prepared and used in training Federal and State pest management specialists.

Thanks for a job well done, Susan and Roger!

SFIWC Meets for 29th Year

The Southern Forest Insect Work Conference convened in Charleston, South Carolina, August 6-9, for its 29th annual meeting. Bob Thatcher, Garland Mason, and Susan Branham participated from the IPM Program, along with more than 120 Program-sponsored investigators and other entomologists and foresters from throughout the U.S.

The work conference provides an annual opportunity for persons interested and involved in forest pest management to meet and discuss mutual problems and ideas. Considerable emphasis was given to the gypsy moth during the 1984 conference as this important pest continues to invade southern hardwood timberlands. Other more traditional topics such as pine bark beetles, seed and cone insects, and new management technologies were also discussed.

Texas SPB Battle Continues

A report by Charles Bryant of the Texas Forest Service indicates that a number of practices have been employed to keep timber losses at a minimum during this past summer's beetle outbreak in southeast Texas. Hazard rating, early detection, and prompt salvage or cut-and-leave controls are apparently doing the job. Beetle activity in recently thinned areas has been limited to unthinned pockets of timber which have older, densely stocked, slow-growing trees.

Bryant reports that nearly 4,200 infestations have been spotted thus far this year. Much of the activity has been concentrated in areas that have a high percentage of mature pine timber

and a recent history of SPB activity. The Sam Houston National Forest has been particularly hard hit.

The report shows that the number of newly detected infestations is decreasing as fall approaches. This trend follows the normal pattern whereby SPB re-attacks trees on the periphery of existing spots rather than initiating new spots at this time of year.

IPM Wrapup Symposium Scheduled

A final symposium to wrap up the business of the Integrated Pest Management Program will be held April 16-18, 1985, in Asheville, North Carolina. Meeting site is the Grove Park Inn, situated at 3,000 feet elevation on Sunset Mountain overlooking the city. The Inn, which contains a new conference center, is on the National Register of Historic Places. Program and accommodations details will be available later as they are firmed up.

The meeting will summarize findings from research conducted in the areas of impact, insect biology, host susceptibility and control in the IPM Program. Proceedings of the symposium will be published. Researchers involved in or interested in bark beetles and diseases affecting southern pines are particularly encouraged to attend.

The Buck Starts in Alabama!

Jim Hyland of the Alabama Forestry Commission recently passed along to the Program office a unique item that he received from a consulting forester in his State. It was a flyer advertising SPB hazard rating as part of forestry prescription services offered by the consultant. The ad was printed on the back of an oversized, facsimile \$100 bill! Jim noted that while he sometimes felt that the Commission's training sessions don't pay, his correspondent proved that in the long run both the training and SPB stand hazard rating pay off in big bucks!

Thanks for an innovative technology transfer experience, Jim.

Southern Entomologists Attend International Congress

Some 2500 entomologists from 86 countries, including several forest entomologists from the southern U.S., participated in the 17th Interna-

tional Congress of Entomology. The Congress was held August 20-26, 1984, in Hamburg, W. Germany.

As part of the forest entomology session, Ron Billings (Texas Forest Service) gave an invitational talk entitled "Semiochemical interactions among pines, bark beetles, and associated insects" which summarized his recent pheromone research.

A symposium on environmental disturbances and incidence of forest insect problems was organized by Tom Payne and Bob Coulson (Texas A&M University) as part of the Congress. Several southern entomologists contributed to this symposium. Tom Payne set the stage with an introductory paper on the role of disturbance in host selection by bark beetles. Other papers were given by Ron Billings (windstorms and forest insect problems), Bob Coulson (lightning in the epidemiology of bark beetle infestations), Fred Hain, North Carolina State University (defensive responses of loblolly pine to southern pine beetle), and Fred Stephen, University of Arkansas (host resistance in loblolly pine and its relationship to SPB population dynamics).

A paper entitled "A key to the mites associated with *Ips typographus* in South Germany," co-authored by John Moser (Southern Forest Experiment Station) and Hermann Bogenschuetz (West Germany), was presented by Dr. Bogenschuetz. In addition, a poster depicting the effects of host patchiness on SPB infestation dynamics was contributed by Bill Mawby, North Carolina State University.

All in all, the International Congress of Entomology provided an excellent opportunity for these southern workers to share and discuss their individual IPM project accomplishments with an international audience. (Contributed by Ron Billings, Texas Forest Service)

Computers Corral SPB in East Texas

National Forest districts in Texas are using a computer to aid in priority treatment and control of southern pine beetle infestations. Each district has a computer terminal connected by phone to a computer located with Forest Pest Management in Pineville, LA. SPB infestations are assigned priorities by computer, enabling control efforts to be focused on those which will cause the greatest losses. Additional information that can be derived from the system includes: 1) Volume salvaged, 2) number of trees cut-and-leave treated, 3) elapsed time (days) since spots have been treated (when to start

post-suppression checks), and 4) number of breakouts that have occurred using different control techniques. All of this data can be recalled using spot numbers, beginning and ending dates of treatment, compartment and stand numbers (stand location), and/or a complete listing of all SPB spots and treatment priorities.

The Texas outbreak has now exceeded 40 MMBF and 150,000 trees cut-and-leave treated for 1984 (see related news update on p. 2). A workload of more than 2,000 infestations has kept the computer system busy. System size will be increased during FY 1985 to allow more than one district to access the computer at a time. (Contributed by Jim Smith, R-8, FPM)

IPM Represented at Canusa Finale

IPM Research Coordinator Garland Mason attended the wrapup symposium of the Canadian-US-sponsored Spruce Budworm RD&A Program in Bangor, ME, September 17-20, 1984. Mason reports that the meeting was well attended by a large number of CANUSA scientists and administrative representatives from both the eastern and western regions of the U.S. and Canada. In addition, users of the CANUSA technology from these same areas and other interested individuals from outside the Program area also participated.

The 4-day conference included sessions devoted to biology of the spruce budworm, economic and social impacts, tactics for prevention and suppression, integration of the technology into forest management systems, and an evaluation of the overall success of the Program.

CANUSA was initiated in 1978 to explore common problems shared by the United States and Canada related to continuing spruce budworm damage in spruce and fir coniferous forests of eastern and western North America. The Program concluded on September 30 of this year following a 1-year extension that provided for a continued accelerated effort to transfer technology coming from the Program. Although the CANUSA Program has officially terminated, the results and outputs of research from this cooperative effort will be seen for years.

Microcomputers Transform S. C. Extension Forestry

A recent article in *The Compiler* (Vol. 2, #2), quarterly journal of the Forest Resources Systems Institute, traced the course of computer

use in Clemson University extension forestry up to the present day experience with microcomputers.

Computer use at Clemson began in the early seventies with an IBM mainframe computer which was largely limited to storage and retrieval of forest resource data. Several systems were subsequently developed to improve access and to automate recordkeeping. Other early uses were to consolidate forestry extension mailing lists, maintain records of timber buyers and processors in South Carolina, and provide a current directory of the industry. These systems are still being used today but are dependent on one programmer.

Then in 1981, Clemson received a private foundation grant to implement a program to improve transfer of agricultural technology to food producers in South Carolina. Seeking more flexible computer power, the grant provided for a microcomputer network to be set up in extension offices throughout the State. Forestry extension joined the network in conjunction with the IPM Program-funded pest management project at Clemson, which sought an effective means for disseminating information and providing analytical tools to extension agents/foresters in the area of pest management. The Pest Management Information Center (PMIC) was established to provide up-to-date printed and computerized information on pest populations and pest management strategies available in South Carolina. With a multi-user computer system, the information center can be online all day without disrupting other computer uses. Also, PMIC callers can communicate directly with specialists in Extension Service offices.

The Clemson IPM project is also presently converting the mainframe SPB program CLEM-BEETLE to run on micros and is gathering other decisionmaking programs which will be accessible through the PMIC.

The College of Forest and Recreation resources has also brought a new microcomputer lab online for teaching purposes which they plan to use to train extension agents and foresters. Specialists are now actively involved in developing ideas for other creative uses of computers. The new notebook-sized computers are being tested for use in field demonstration and data collection and in providing on-the-spot analysis when agents are working with individual landowners.

For more information on the PMIC and microcomputer applications to pest management activities, contact: Cooperative Extension Service, Dept. of Forestry, Clemson University, Clemson, SC 29631.

ESPBRAP Publications Still Available

The IPM Program office would like to inform PM News readers of the continuing availability of a number of publications produced by its predecessor program ESPBRAP:

Technical Bulletin #1612, "Site, Stand, and Host Characteristics of Southern Pine Beetle Infestations"

Technical Bulletin #1613, "Evaluating Control Tactics for the Southern Pine Beetle"

Technical Bulletin #1630, "Modeling Southern Pine Beetle Populations"

Agriculture Information Bulletin #438, "Program Accomplishments Report"

Anyone wishing copies of the above may write to: IPM Program, USDA Forest Service, Southern Forest Experiment Station, 2500 Shreveport Highway, Pineville, LA 71360.

Article Debates Thinning Pros and Cons

Should pine stands be thinned for pest management purposes? A recent item in an Extension Service newsletter from the University of Georgia's College of Agriculture observes that there are two sides to the question.

While thinned stands are less likely to be attacked by the SPB, a short rotation without thinning eliminates interim management decisions and minimizes management costs. Likewise, with no thinning operations, there is less likelihood of a black turpentine beetle attack and/or annosus root rot infection. In some areas, the report points out, there are no available logging crews and buyers for small tree thinning operations.

The conclusion is that there is no pat answer to the question, and any recommendation to thin must be based on individual landowner management goals and local conditions. (For more information, consult Forest Resources Notes #49, University of Georgia, College of Agriculture, Athens, GA 30602; July 1984).

Other Publications

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U.S. Department of Agriculture, Forest Service, Southern Region; 1984. 1 p.

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Billings, R. F.; Ward, J. D. How to conduct a southern pine beetle aerial detection survey. Tex. For. Serv. Circ. 267. Lufkin, TX: Texas Forest Service; 1984. 19 p.

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Taha, H. A.; Stephen, F. M. Modeling with imperfect data: a case study simulating a biological system. Simulation 42(3): 109-115; 1984.

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delay of issue #46, a Special Edition. We
appreciate your patience and trust you
found the information it contained useful.

